

**EUROLEON NOSTRAS (FOURCROY, 1785) A BRITISH SPECIES  
AND NOTES ON ANT-LIONS  
(NEUROPTERA: MYRMELEONTIDAE) IN BRITAIN**

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BARBUT (1781) was first to recognise “*Myrmeleon formicarum*” as a British species. Stephens (1829) likewise included “*Myrmeleon formicarum*” as British, although he had never seen a British specimen. However, reconsidering the evidence he commented that it was “Erroneously introduced as British by Barbut” (Stephens, 1835). Hagen (1858) was of the opinion that it was very probable that “*Myrmeleon* – and probably more than one species – occurs in England”. McLachlan (1865) was more cautious and whilst not ruling out the possibility that they might await discovery on the south-west coast of Ireland asserted “they are at any rate absent from England, and I doubt if we can lay the slightest claim to including them in our fauna.” No species of ant-lion was included by Killington (1936 and 1937) in his monograph on the British Neuroptera. To bring things up to date, Plant (1994) records that:

“Two species of ant-lion have a slight claim to ‘British’ status. One [*Euroleon nostras* (Fourcroy)] occurs in Jersey, but is apparently absent from both Britain and Ireland, and the other, [*Myrmeleon formicarius* L.] was recorded as a single specimen in Suffolk in 1931, and has not been recorded since.”

The discovery of three specimens of *Euroleon nostras* in Suffolk in 1994 and subsequent reappraisal of historical records make it necessary to redefine the status of ant-lions in Britain.

***Myrmeleon formicarius* Linnaeus, 1767**

“A fine male *Myrmeleon formicarius*, Linn., was found in Gorleston on 5th September 1931. I was then unsuccessfully working the south face of a favourite range of palings for Micro-Lepidoptera. . . . The insect was clinging to the paling at about thirty inches from the ground, in an apparently torpid condition” (Doughty, 1931).

The insect was identified by Claude Morley who, in a footnote to Doughty's report, does not rule out the possibility that it might be native: “All Gorleston, including the spot of capture at a few hundred yards south-west of the ry station, stands upon glacial sand, not dissimilar from that of Fontainebleu Forest where *M. formicarius* abounds”. The find was of such general interest that a lengthy report appeared in the local newspaper in which Morley describes the possibility of the insect having been “merely blown across the intervening seventy miles of sea” from the Continent as “an extremely improbable contingency” (Morley, 1932).

The specimen is preserved in the Morley Collection (R.1953-22) at Ipswich Museum. It is labelled in Morley's hand "5.ix.1931 Sitting sluggard on paling in Gorleston (*Tr. Suff. Soc. 31*)". It has obvious dark markings on the wings and is *Euroleon nostras* (teste C.W. Plant) and not *M. formicarius* which has entirely clear wings.

It is not difficult to understand how the Gorleston specimen was misnamed by Morley. For many years in Britain the name "*formicarius*" was applied to the ant-lion with spotted wings that we now know as *E. nostras*. Barbut (1781) describes "*Myrmeleon formicarum*" as having wings "diaphanous, adorned with a network of black fibres, charged with several blackish-brown spots, rather large, especially towards their outer edge" and dark wing markings are clearly shown in his figures of the insect (plates 12 and 22). According to Stephens (1835) *M. formicarius* has "Wings hyaline, spotted with fuscous". Hagen (1858) states that *M. formicarius* has "fore wings with a white stigma and black spots; hindwings with two black spots on the costa". Morley (1932), possibly following Hagen, comments that *M. formicarius* is "well distinguished by the conspicuous smokey spots upon its otherwise quite transparent wings". It is unclear whether or not Killington, who also reported the capture (Killington, 1932), actually saw the specimen.

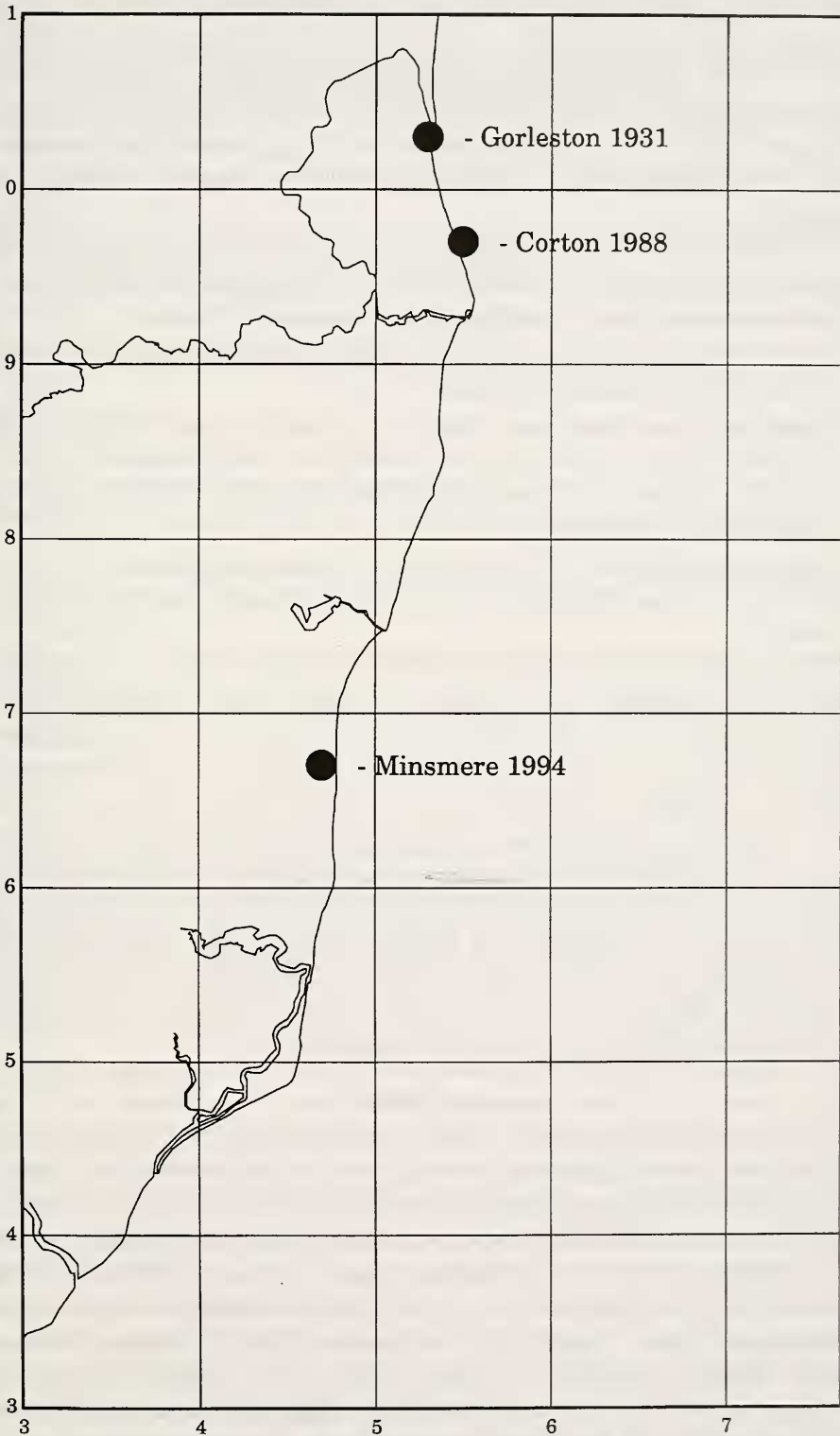
Early references are best treated as unreliable and in any case should probably be referred to *Euroleon nostras*. In summary, there is no substantive record of *M. formicarius* from the British Isles. It has no place on our list.

### ***Euroleon nostras* (Fourcroy, 1785)**

When Colin Plant telephoned me with an invitation to attend a field meeting that he had planned (Plant, 1992) to search for ant-lions along the East Anglian coast, I made polite excuses and mentally wrote the venture off as misguided! After all, as far as was generally known, there had been only a single record and that as long ago as 1931. The field meeting went ahead but was unsuccessful. However, it was not long before I had to revise my thoughts.

On 21 July 1994 Hilary and Geoff Welch (Warden of Minsmere RSPB Reserve) found two adult ant-lions on the road to the reserve, near the toilet block (TM471671, VC25). One of them was brought to me for identification (Mendel, 1994) and proved to be *E. nostras*. The other which was injured/deformed with a "kink in the abdomen" was released. It is interesting to speculate that it might have been deformed rather than injured which would have made migration from the Continent most unlikely. A third specimen was found squashed on the floor of the toilet block on 31 August 1994 by D. Fairhurst (Assistant Warden). The toilets were cleaned daily so the specimen could not have been there for long. Identification of the latter specimen was confirmed by Mr S.A. Brooks and Dr P.C. Barnard of the Natural History Museum, London.

## Ant-lion records in East Suffolk (VC 25)



It is now established that the Gorleston (TG5203, VC25) specimen captured by C.G. Doughty on 5th September 1931 is also *E. nostras*. There is a further Suffolk record. Dr A.G. Irwin has kindly provided me with a copy of a note he wrote with T.R. Mitchell recording a specimen of *E. nostras* that flew into a house in Corton, near Lowestoft (TM5496, VC25) on 29 August 1988. It was photographed before being released and identified from the photographs by Dr Irwin. The note was never submitted for publication.

Excluding earlier records which are unreliable, *E. nostras* has now been recorded at three localities in East Suffolk (VC25) over a period of 63 years. The localities are all near to the coast, within a span of 25 miles.

How can these records be explained? There are four possibilities which are not necessarily mutually exclusive.

1. Occasional specimens are brought over from the Continent with vegetables or other goods, or in some other way "ship-assisted".
2. Individuals arrive in Britain as genuine migrants, perhaps helped by freak weather conditions.
3. Occasional migrants establish temporary breeding populations.
4. There is a long-established, indigenous population surviving at low density.

If the specimens found in Britain were "ship-assisted" it is very difficult to explain the concentration of records on the Suffolk coast. Similarly if they were genuine migrants. *E. nostras* is found widely on the Continent occurring nearest to us in northern France, Belgium and the Netherlands (Aspöck, H., Aspöck, U. & Hölzel, H., 1980). If the Suffolk records were the result of migration, why are there no records from Norfolk, Essex and Kent? *E. nostras* is a weak flier and not a recognised migrant. The concentration of records in Suffolk suggests a native population surviving at low density. The sandy soils of the Sandlings and Suffolk coast provide apparently ideal breeding habitat. However, larval pits need to be found, to be certain that the species is breeding in the area. I am sure it is only a matter of time. In any case, *E. nostras* deserves a place on the British list.

#### Acknowledgments

I thank Hilary and Geoff Welch (RSPB, Minsmere) for bringing two of the ant-lions found at the Minsmere Nature Reserve to the Museum and Dr A.G. Irwin (Norfolk Museums Service) and Mr T.R. Mitchell for making available their unpublished manuscript. For confirming my identification of C.G. Doughty's Gorleston specimen I thank Mr C.W. Plant (National Recorder for Neuroptera), and for checking my identification of one of the Minsmere specimens I thank Mr S.A. Brooks and Dr P.C. Barnard (Natural History Museum, London). I further thank Colin Plant for valuable comments on the first draft of this manuscript. The map was produced by Mr M.N. Sanford (Suffolk Biological Records Centre, Ipswich Museum).

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### *Malachius aeneus* (L.) (Col.: Melyridae) in Cambs. and elsewhere

Cambridgeshire is not among the rather numerous counties listed for this attractive species, now much decreased and classed as “rare” (Hyman & Parsons, 1992, *A review of the scarce and threatened Coleoptera of Great Britain*. part 1: 360). It is therefore worth reporting that the late C.E. Tottenham found it profusely at a restricted site within the bounds of Cambridge about 1950 or 51. It was along a hedgerow bordering a field, which he pointed out to me, where the beetle was still common (mostly males) on 25.v.52. This is the sole record for East Anglia that I can find.

Otherwise I have met with *M. aeneus* only singly: Brockenhurst, New Forest, 21.vi.35, a male and Cheshunt, Hertfordshire, 12.vi.40, a female. The site, by the river Lea, was a productive one which I constantly revisited in that and later years without seeing another. I have also a male taken in this district (Shooters Hill, West Kent) by my late friend A.W. Gould in May 1952; it was on an umbel, probably of *Anthriscus*, in a lane bordering the golf-course, where I have often collected in subsequent years. Though unchanged, *M. aeneus* seems unlikely to survive there.— A.A. ALLEN, 49 Montcalm Road, Charlton, London SE7 8QG.